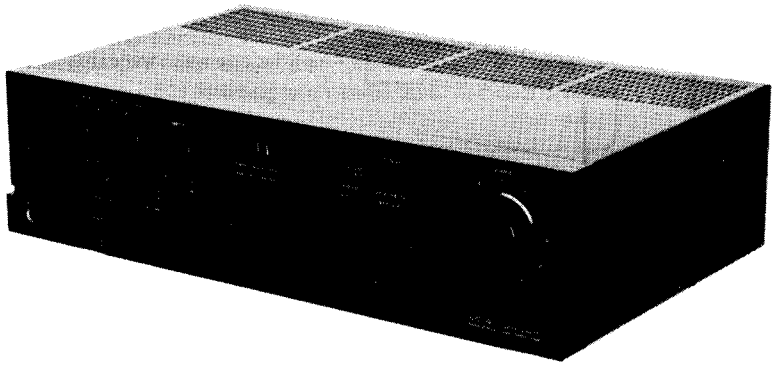
DER NO. HAD8704086C8

Service Manual

Stereo Integrated Amplifier

Amplifier

SU-V55A



Color

(S) .....Silver Type
(K) .....Black Type

Area

Color	Area
(S)(K)	(E) .....Continental Europe.
(S)(K)	(Ei) .....Italy.
(S)(K)	(EG).....F.R.Germany.
(S)(K)	(EB).....Belgium.
(S)(K)	(EK).....United Kingdom.
(S)(K)	(EF) .....France.
(S)(K)	(EH).....Holland.
(S)(K)	(XL) .....Australia.
(S)(K)	(XA).....Asia,Latin America,Middle Near East,Africa and Oceania.

SPECIFICATIONS

(DIN 45 500)

■ AMPLIFIER SECTION

20 Hz ~ 20 kHz continuous power output	
both channels driven	2 x 60 W (8Ω)
1 kH continuous power output	
both channels driven	2 x 100 W (4Ω)
Total harmonic distortion	
rated power at 20 Hz ~ 20 kHz	0.002% (8Ω)
rated power at 1 kHz	0.005% (4Ω)
	0.0009% (8Ω)
half power at 20 Hz ~ 20 kHz	0.002% (8Ω)
half power at 1 kHz	0.002% (4Ω)
	0.0008% (8Ω)
Intermodulation distortion	
rated power at 250 Hz:8 kHz = 4:1, 8Ω	0.005%
rated power at 60 Hz:7 kHz = 4:1,SMPTE,8Ω	0.005%
Power bandwidth	
both channels driven,-3dB	5 Hz ~ 60 kHz (8Ω,0.03%)
Residual hum and noise	0.8 mV
Damping factor	30 (4Ω),60 (8Ω)
Input sensitivity and impedance	
PHONO MM	2.5mV/47 kΩ
PHONO MC	170 μV/220 Ω
TUNER,CD,AUX,TAPE 1/DA TAPE, TAPE 2/EXT	150mV/22 kΩ
PHONO maximum input voltage (1 kHz,RMS)	
MM	160 mV
MC	12 mV
S/N	
rated power(4Ω)	
PHONO MM	77 dB (83 dB:IHF,A)
PHONO MC	64 dB (65 dB:IHF,A)
TUNER,CD,AUX, TAPE 1/DA TAPE,TAPE 2/EXT	91 dB (100 dB:IHF,A)
-26 db power (4Ω)	
PHONO MM	68 dB
PHONO MC	62 dB
TUNER,CD,AUX, TAPE 1/DA TAPE,TAPE 2/EXT	70 dB
50 mW power (4Ω)	
PHONO MM	62 dB
PHONO MC	61 dB
TUNER,CD,AUX, TAPE 1/DA TAPE,TAPE 2/EXT	62 dB
Frequency responce	
PHONO	RIAA standard curve ± 0.8dB(30 Hz ~ 15 kHz)
TUNER,CD,AUX, TAPE 1/DA TAPE,TAPE 2/EXT	5 Hz ~ 120 kHz (-3 dB) +0, -0.2 dB (20 Hz ~ 20 kHz)
Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	20 kHz, +10 dB ~ -10 dB
Loudness control (volume at -30 dB)	50 Hz, +9 dB
Output voltage	
TAPE 1,2 REC OUT	150 mV
Channel balance, AUX 250 Hz ~ 6,300 Hz	±1 db
Channel separation, AUX 1 kHz	50dB
Headphones output level and impedance	500 mV/330 Ω
Load impedance	
MAIN or REMOTE	4 Ω ~ 16 Ω
MAIN and REMOTE	8 Ω ~ 16 Ω

■ GENERAL

Power consumption	490 W
Power supply	
For United Kingdom and Australia	AC 50 Hz/60 Hz, 240 V
For continental Europe	AC 50 Hz/60 Hz,220 V
For others	AC 50 Hz/60 Hz, 110 V/127 V/220 V/240 V
Dimensions (W x H x D)	430 x 126 x 290 mm (16-15/16″ x 4-31/32″ x 11-7/16″)
Weight	7.5 kg (16.5 lb.)

Notes:
1.Specifications are subject to change without notice. Weight and dimensions are approximate.
2.Total harmonic distortion is measured by the digital spectrum analyzer (H.P. 3045 system).

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

MC-Service

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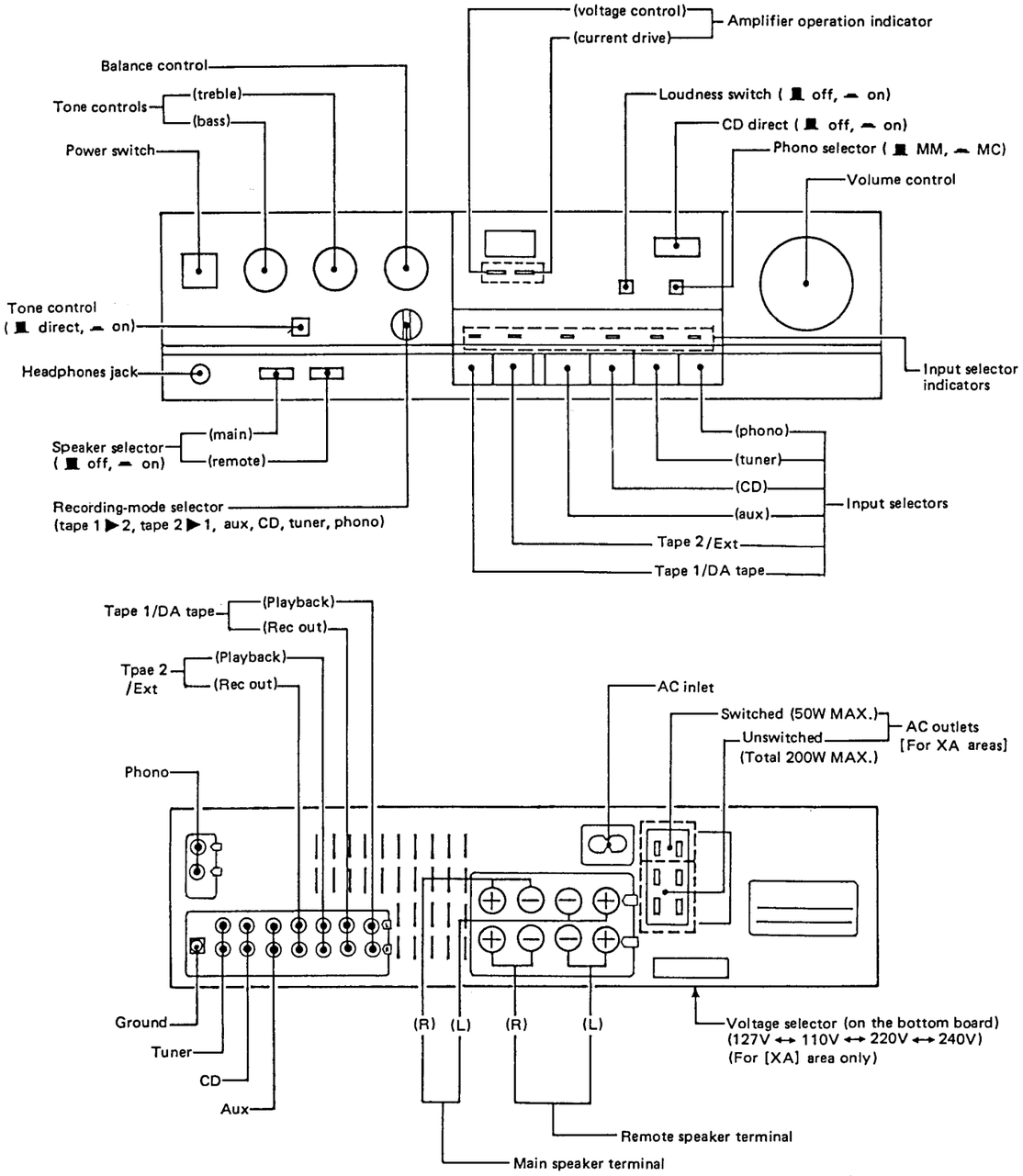
■ LOCATION OF CONTROLS



- The power supply for this unit varies depending upon the areas. Also, the parts used for power supply are different. So, refer to the circuit diagram and replacement parts list.

* [XA] area is provided with voltage selector and AC outlets.
* 240V (50/60Hz) for Australia and United Kingdom.
* 220V (50/60Hz) for Continental Europe.
* 127V/110V/220V/240V (50/60Hz) for other [XA] area.
* Phono input capacitance is about 100pF.

Suggestions

- If noise is very annoying while listening to an FM or AM broadcast, switch OFF the video disc player, compact-disc player and turntable.
- Switch OFF the video disc player power if noise is excessive while listening to an audio tape, compact disc or regular phono disc.

Notes:

- To record sounds from a compact disc, press the input selector marked "CD".
  The compact-disc-direct switch is for listening only; it cannot be used to select the compact disc as a recording source.

■ PROTECTION CIRCUITRY

The protection circuitry may have operated if either of the following conditions is noticed:

- No sound is heard when the power is switched ON.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted" , or if speaker systems with an impedance less than the indicated rated impedance of this unit are used.
If this occurs, follow the procedure outlined below:

1. Switch OFF the power.
2. Determine the cause of the problem and correct it.
3. Switch ON the power once again.

Note:
When the protection circuitry functions, the unit will not operate unless the power is first switched OFF and then ON again.

■ BEFORE REPAIR AND ADJUSTMENT

(1) Turn off the power supply. Using a 10Ω, 5W resistor, shortcircuit both ends of power supply capacitors (C705, C706, 8200 μF) in order to discharge the voltage.

(2) Before turning on the power switch of the set .
A. Connect the voltage controller to the primary side.
B. Connect the AC ampere meter to the primary side or connect the DC voltage metar to the "±B" circuit of the secondary side.
C. Turn the VR of ICQ (VR401 and VR402) to minimum (counterclockwise).
D. After setting the output to zero of the voltage contoller, turn on the power switch of the set.
And increase the output of voltage controller gradually.
Then, check carefully whether the current value of primary side become more than followings value or whether the DC voltage of secondary side is increasing slowly.
E. If the value of current is increasing unusually or the DC voltage is not increasing, lower the output level of voltage contoller immediately.
F. Check the transistors of voltage amplifier and current amplifier IC501.
G. After repairing, adjust the ICQ.

- The current value of the primary side at no signal. (Confirm the power supply voltage of each area and provided voltage of the set.)

Power supply voltage	AC110V	AC127V	AC220V	AC240V
Consumed current 50/60Hz	280 ~ 560mA	260 ~ 520mA	140 ~ 280mA	130 ~ 260mA

D

■ DISASSEMBLY INSTRUCTIONS

" ATTENTION SERVICER"

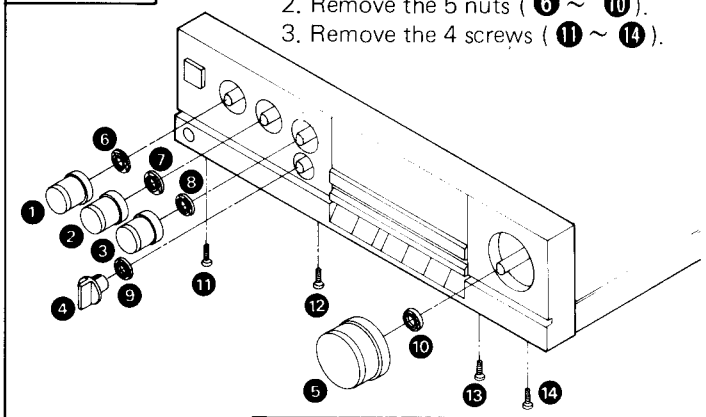
SOME CHASSIS COMPONENTS MAY HAVE SHARP EDGES.
BE CAREFUL WHEN DISASSEMBLING AND SERVICING.

Ref. No. 1	How to remove the cabinet
Procedure 1	● Remove the 5 screws.

Ref. No. 2	How to remove the front panel

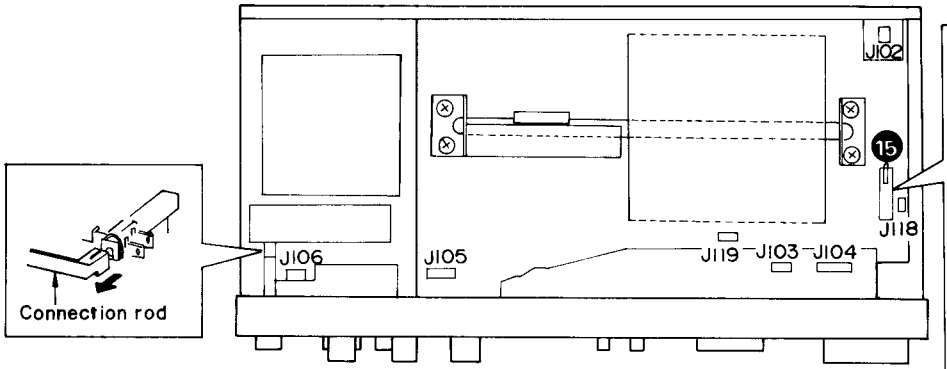
Procedure 1 →2

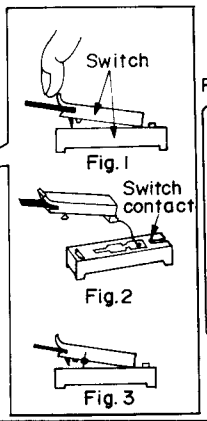
1. Remove the 5 knobs (❶ ~ ❺).
2. Remove the 5 nuts (❻ ~ ❿).
3. Remove the 4 screws (⓫ ~ ⓮).
4. Remove the connection rod.
5. Remove the connector (J102, J103, J106, J118, J119).
6. Remove the flat cable (J104, J105).
7. Remove the "Rec-select" switch (⓯).

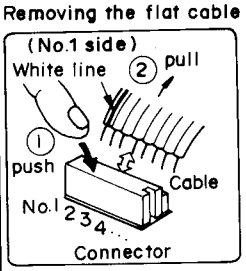


● **How to remove the "Rec-select" switch**
Pushing the rec switch, shift it up as in Fig. 1.

● **How to fit the rec switch**
(1) Shift the switch contact inside.
(2) Turn the "Rec-select" switch (selector knob) counterclockwise.
(3) Let the "Rec-select" switch claw change with the switch, and shift the "Rec-select" switch down while pushing in.



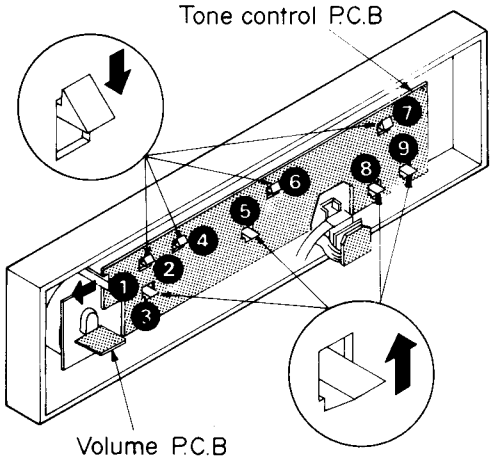


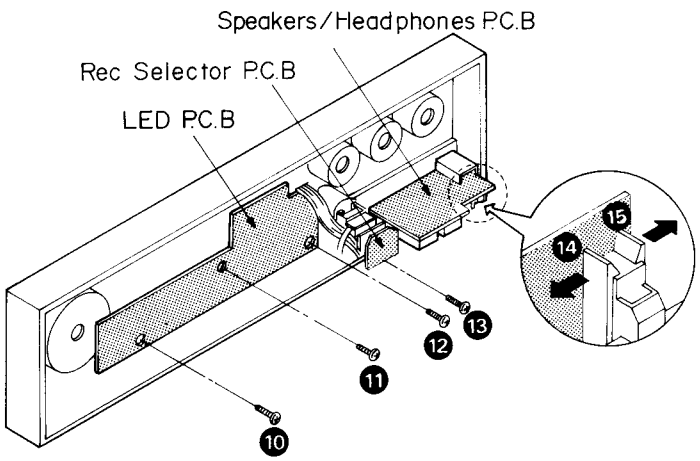


Ref. No. 3	How to remove the P.C.B.

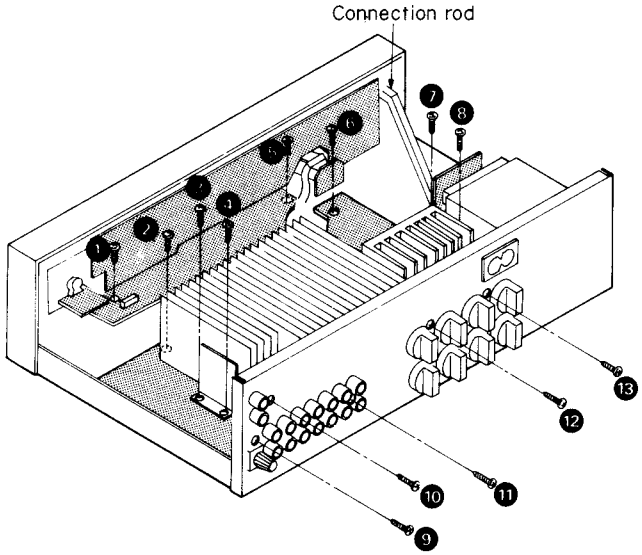
Procedure 1 →2 →3

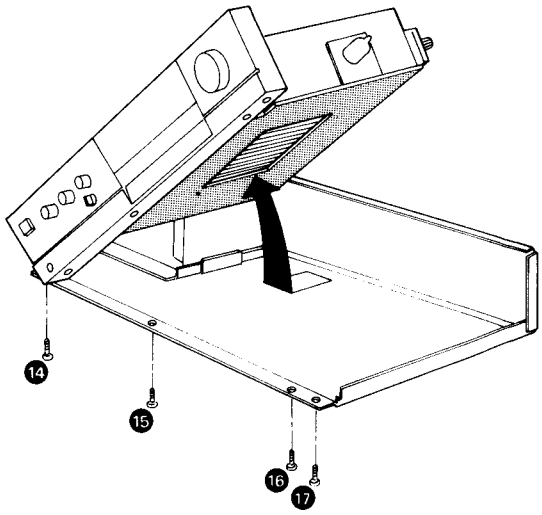
1. Push the 9 tabs (❶ ~ ❾).
2. Remove the tone and volume P.C.B.
3. Remove the 3 screws (❿ ~ ⓬).
4. Remove the LED P.C.B.
5. Remove the 1 screw (⓭).
6. Push the 2 tabs (⓮ , ⓯).
7. Remove the speakers/headphones P.C.B.



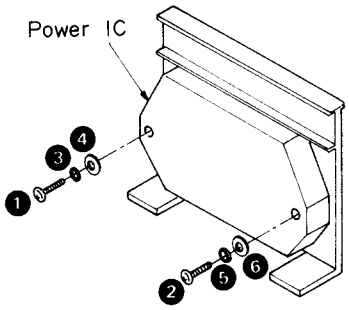


Ref. No. 4	How to remove the main P.C.B.
Procedure 1 →4	1. Remove the 15 screws (❶ ~ ⓮). 2. Remove the connection rod. 3. Remove the main P.C.B.





Ref. No. 5	How to remove the power IC.
Procedure 1 →4 →5	1. Unsolder the power IC. 2. Remove the 2 screws (❶ , ❷). 3. Remove the 4 washer (❸ ~ ❻). ● When mounting the power IC, apply silicon thermal compound (SZZ0L15 or equivalent) to the rear of the power IC.



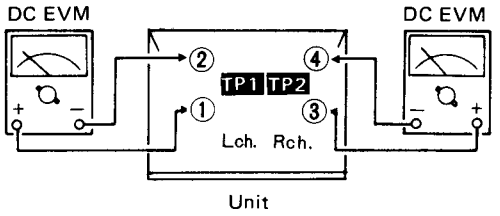
■ MEASUREMENTS AND ADJUSTMENTS

Control positions and equipment used.

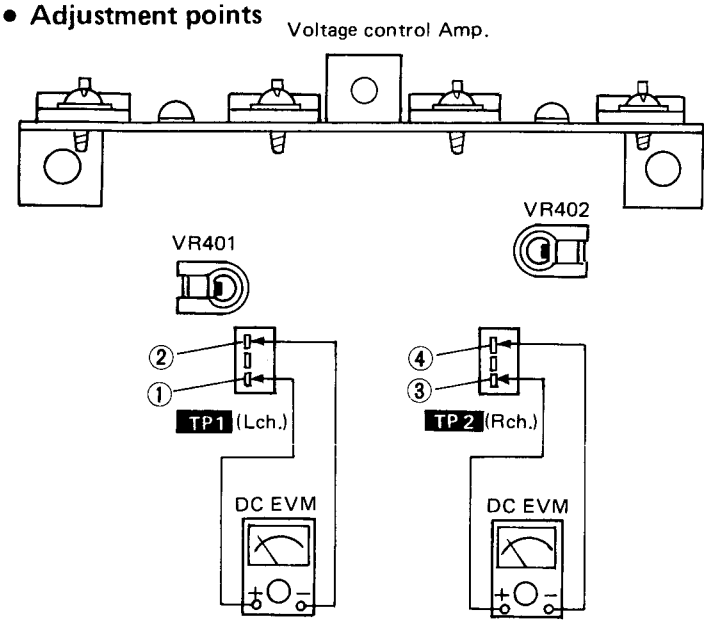
- Volume knob . . . . . 0 (Minimum)
- Main speaker selector . . . . . off
- Remote speaker selector . . . . . off
- Speaker impedance switch . . . . . 8Ω ~ 16Ω
- DC electronic voltmeter (EVM)

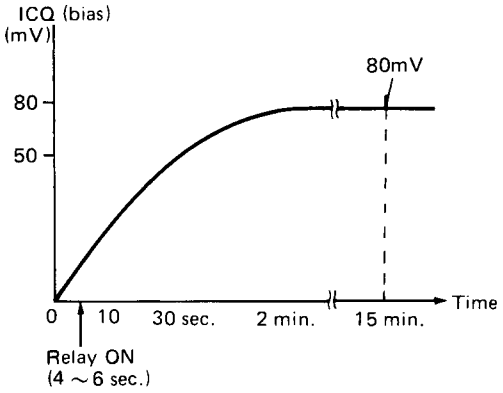
IDLING (ICQ) ADJUSTMENT

1. Test equipment connection is shown in figure. Connect the DC EVM. on both channels.)
2. Turn the ICQ control volume (**VR401, VR402**) counter-clockwise.
3. Turn ON the set when it is cold, and 15 sec. later, adjust **VR401** and **VR402** so that the voltage is **50mV** Also, check that the voltage is **60 ~ 85mV** (standard: **80mV**) after lapse of **10 – 15 minutes.** (Below **85mV** after lapse of **60 min.**).

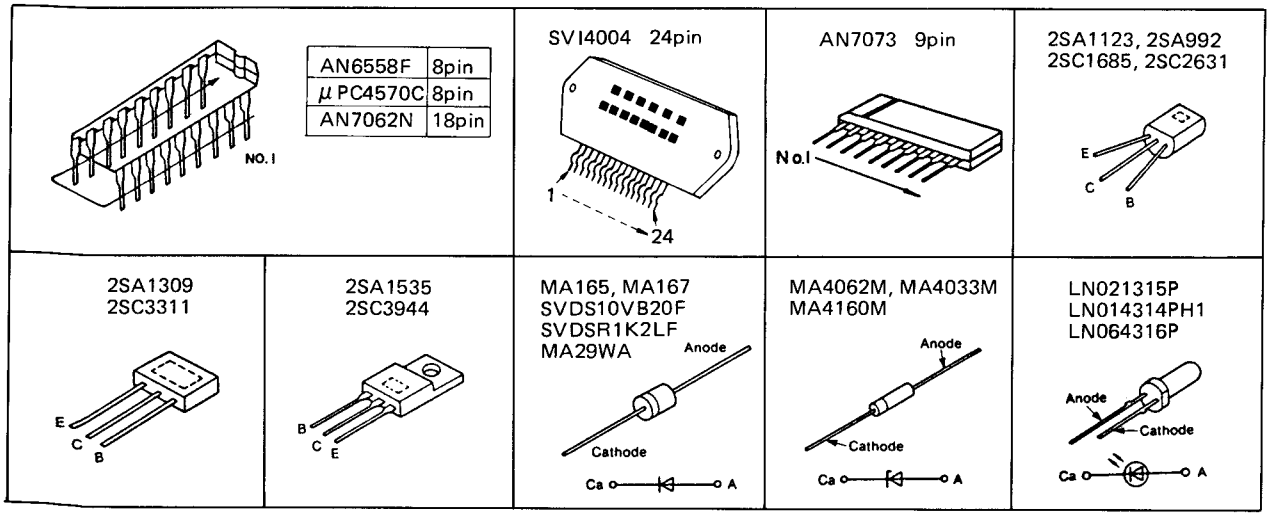


- **Adjustment points**

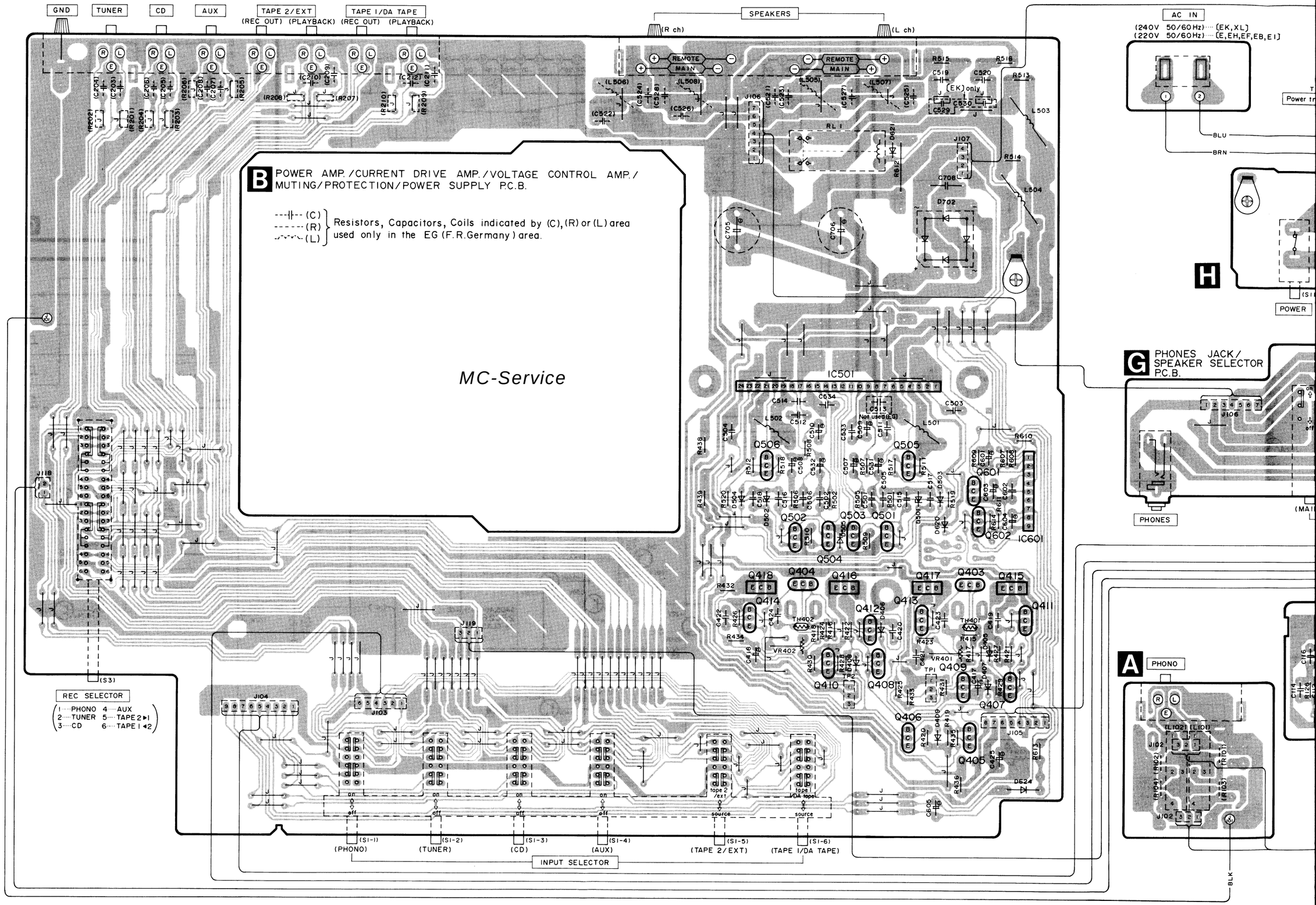




- **Terminal guide of IC, transistor and diodes**



■ PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM



AC IN
(240V 50/60Hz) ···· (EK, XL)
(220V 50/60Hz) ··· (E, EH, EF, EB, EI)

T1 Power transformer

J107

BLU

BRN

C1

F1 T2A

(S11)

POWER

H

(XA) ONLY

AC IN
(110/127/220/240V 50/60Hz)

T1 Power transformer

J107

J5 J1001 J2001 J4 J2 J3

F2 T4A

F1 T2A

S12 110V 220V 240V 127V 127V 240V 110V 220V

(S11)

POWER

VOLTAGE SELECTOR

(UNSWITCHED) (SWITCHED)

AC OUTLET

(EG) ONLY

AC IN
(220V 50/60Hz)

L1

C1

(S11)

POWER

AMPLIFIER OPERATION MONITOR

G PHONES JACK/ SPEAKER SELECTOR P.C.B.

J106

R524 R523

on off on off

PHONES

(S9-1) (MAIN)

(S9-2) (REMOTE)

SPEAKERS

E

(CD DIRECT IND.)

D601

J113

F

TH201 TH202 J115 VR201-2 VR201

VOLUME

(CURRENT DRIVE IND.) (VOLTAGE CONTROL IND.)

D609 D610 R604 R605

D611 R602

J104

D603 D604 D605 D606 D607 D608

(PHONO IND.) (TUNER IND.) (CD IND.) (AUX IND.) (TAPE 2/EXT IND.) (TAPE 1/DA TAPE IND.)

D LED INDICATOR P.C.B.

C PHONO EQUALIZER/ TONE CONTROL/ VOLTAGE CONTROL AMP. P.C.B.

CD DIRECT

S5

J118 J119 J113 J103 J102

IC101

Q601 D601 D602

Q701 Q703 Q702 Q402 Q404 Q401 Q403 IC401

J105 VR202

IC301 VR302-2 VR302-1 VR301-2 VR301-1

defeat

(S4) PHONE SELECTOR

(S6) LOUDNESS

BALANCE

TREBLE

TONE CONTROL

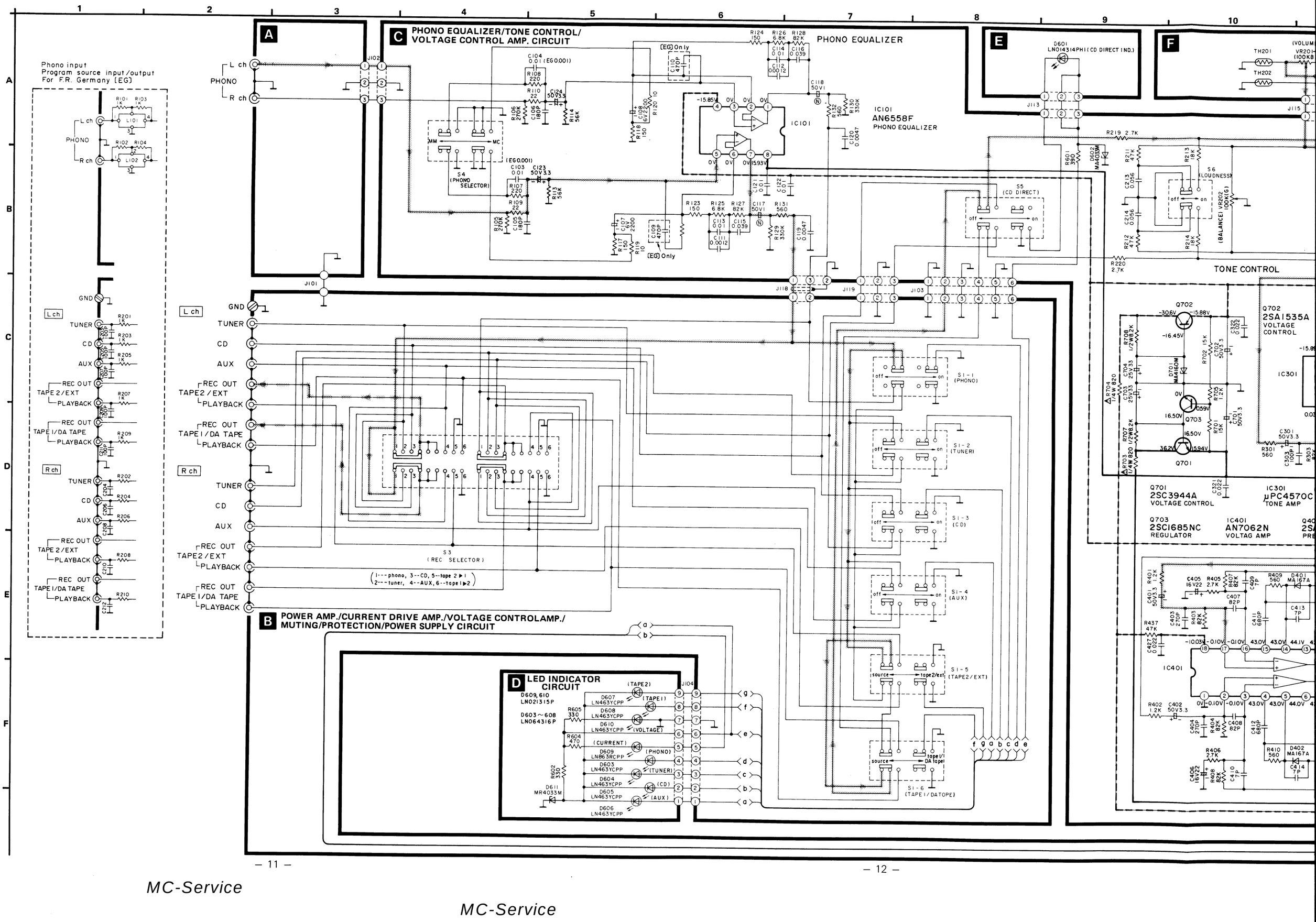
(S8)

BASS

A PHONO

J101 J102

BLK


A
Phono input
Program source input/output
For F.R. Germany (EG)
L ch
PHONO
R ch
J102
J101
GND
L ch
TUNER
CD
AUX
REC OUT
TAPE2/EXT
PLAYBACK
REC OUT
TAPE1/DA TAPE
PLAYBACK
R ch
S3
(REC SELECTOR)
(1---phono, 3--CD, 5--tape 2▶1
2---tuner, 4--AUX, 6--tape 1▶2)
C PHONO EQUALIZER/TONE CONTROL/
VOLTAGE CONTROL AMP. CIRCUIT
PHONO EQUALIZER
(EG) Only
(EG0.001)
MM
MC
S4
(PHONO SELECTOR)
IC101
AN6558F
PHONO EQUALIZER
-15.85V
-15.93V
S5
(CD DIRECT)
off
on
S6
(LOUDNESS)
(BALANCE) VR202 (100K(G)
TONE CONTROL
J118
J119
J103
S1-1
(PHONO)
S1-2
(TUNER)
S1-3
(CD)
S1-4
(AUX)
S1-5
(TAPE2/EXT)
S1-6
(TAPE1/DATAPE)
source
tape2/ext
tape1/DA tape
B POWER AMP./CURRENT DRIVE AMP./VOLTAGE CONTROLAMP./
MUTING/PROTECTION/POWER SUPPLY CIRCUIT
D LED INDICATOR
CIRCUIT
D609,610
LN021315P
D603~608
LN064316P
(TAPE2)
(TAPE1)
(VOLTAGE)
(CURRENT)
(PHONO)
(TUNER)
(CD)
(AUX)
D611
MR4033M
J104
E
D601
LN014314PHI(CD DIRECT IND.)
F
TH201
TH202
(VOLUM
VR201
(100KB
J115
Q702
2SA1535A
VOLTAGE
CONTROL
-30.6V
-15.88V
-16.45V
IC301
0V
0.59V
16.50V
Q703
36.2V
15.94V
Q701
Q701
2SC3944A
VOLTAGE CONTROL
IC301
μPC4570C
TONE AMP
Q703
2SCI685NC
REGULATOR
IC401
AN7062N
VOLTAG AMP
-10.03V
-0.10V
43.0V
44.1V
44.0V
IC401

F

TH201 TH202 (VOLUME) VR201-1 (100KB) (VOLUME) VR201-2

J115

S6 (LOUDNESS) R213 18K R214 18K (BALANCE) VR202 100K(G)

TONE CONTROL

Q702 2SA1535A VOLTAGE CONTROL

IC301

S8 (TONE CONTROL) defeat on

(BASS) VR301-2 100K(C) (TREBLE) VR302-2 100K(C)

Q701 2SC3944A VOLTAGE CONTROL

IC301 μPC4570C TONE AMP

Q703 2SC1685NC REGULATOR

IC401 AN7062N VOLTAG AMP

Q401,402 2SA1123 PRE DRIVE

IC401

(EG)Only

VOLTAGE CONTROL AMP.

J105

IC501 POWER AMP./CURRENT DRIVE AMP.

BRIGE NET WORK

Not used (EG)

Q501 Q502 Q503 Q504

D505 MA29WA

Q505 Q506

(EK)Only

Q403,404 2SC1685 ICQ ADJ.

Q407,408 2SC3311A LIMITER

VOLTAGE CONTROL AMP.

TP1 TP2

Q405,406,411,412 2SC2631 AA CLASS AMP.

Q409,410 2SA1309A LIMITER

Q415,416 2SC3944A AA CLASS AMP.

Q417,418 2SA1535A AA CLASS AMP.

Q413,414 2SA1123 AA CLASS AMP

IC501 SV14004 POWER AMP.

Q501,502 2SC2631 CURRENT STABILIZER

Q503,504 2SA1123 CURRENT STABILIZER

Q505,506 2SA992 OVER LOAD DET.

IC601 AN7073 PROTECTION

MUTING/ PROTECTION

IC601 MUTING BIAS DC DET AC DET OUTPUT SHINK OVER LOAD DETECTOR

HEADPHONES

S9-1 (MAIN) S9-2 (REMOTE)

G

PHONES JACK/ SPEAKER SELECTOR CIRCUIT

L ch MAIN R ch SPEAKERS L ch REMOTE R ch

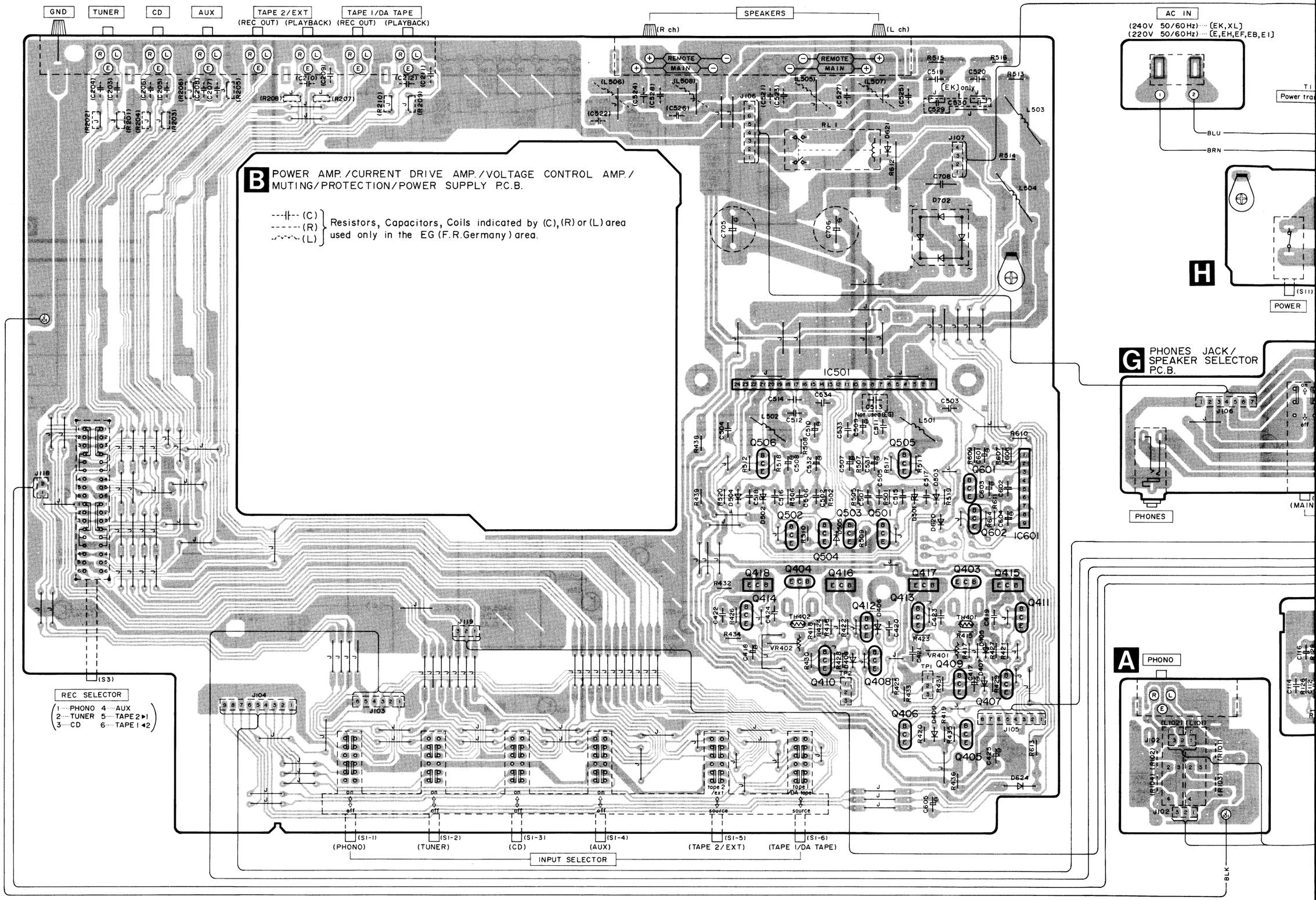
Q601 2SA992 RELAY DRIVE

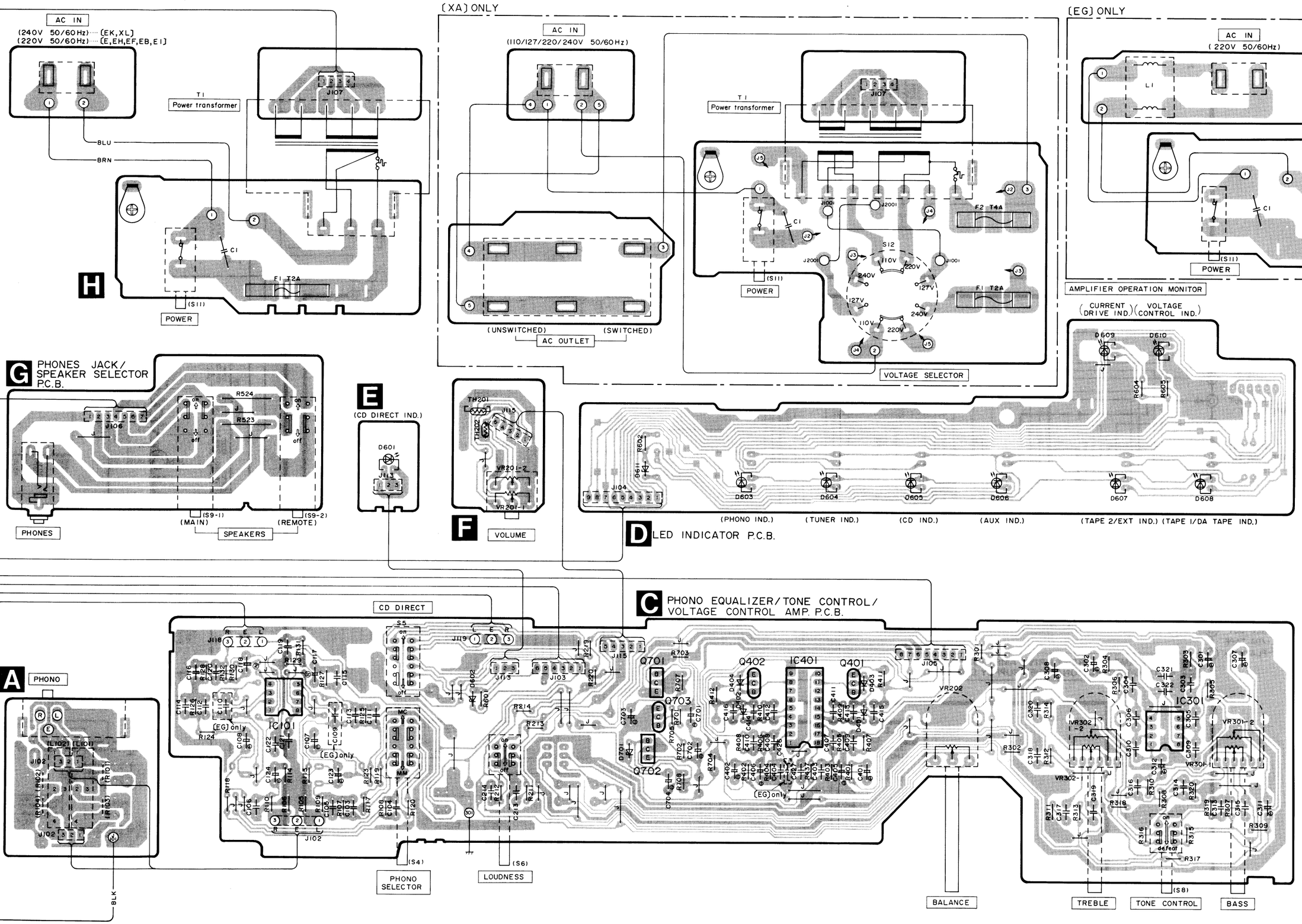
Q602 2SA1309A LED DRIVE

D702 SVDS10VB20F

J107

■ PRINTED CIRCUIT BOARDS AND WIRING CONNECTION DIAGRAM

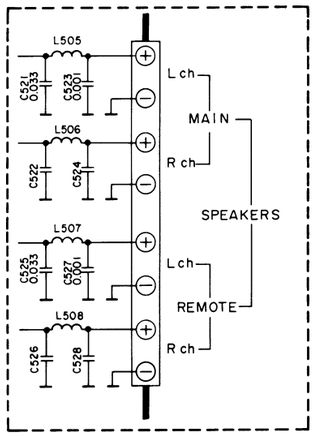



AC IN
(240V 50/60Hz)····(EK,XL)
(220V 50/60Hz)····(E,EH,EF,EB,EI)
T1
Power transformer
J107
BLU
BRN
C1
F1 T2A
(S11)
POWER
H
(XA) ONLY
AC IN
(110/127/220/240V 50/60Hz)
T1
Power transformer
J107
J100
J200
J4
J5
J2
J3
C1
F2 T4A
F1 T2A
S12
110V
220V
240V
127V
(S11)
POWER
(UNSWITCHED)
(SWITCHED)
AC OUTLET
VOLTAGE SELECTOR
(EG) ONLY
AC IN
(220V 50/60Hz)
L1
C1
(S11)
POWER
AMPLIFIER OPERATION MONITOR
G PHONES JACK/ SPEAKER SELECTOR P.C.B.
J106
R524
R523
on
off
PHONES
(S9-1)
(MAIN)
SPEAKERS
(S9-2)
(REMOTE)
E
(CD DIRECT IND.)
D601
J113
F
TH201
TH202
J115
VR201-2
VR201-1
VOLUME
(CURRENT DRIVE IND.)
(VOLTAGE CONTROL IND.)
D609
D610
R604
R605
R602
D611
J104
D603
D604
D605
D606
D607
D608
(PHONO IND.)
(TUNER IND.)
(CD IND.)
(AUX IND.)
(TAPE 2/EXT IND.)
(TAPE 1/DA TAPE IND.)
D LED INDICATOR P.C.B.
C PHONO EQUALIZER/TONE CONTROL/ VOLTAGE CONTROL AMP. P.C.B.
CD DIRECT
A PHONO
J102
J103
J105
J118
J119
S5
S4
S6
S8
IC101
IC401
IC30
Q701
Q702
Q703
Q402
Q401
VR202
VR302-2
VR302-1
VR301-2
VR301-1
(EG) only
PHONO SELECTOR
LOUDNESS
BALANCE
TREBLE
TONE CONTROL
BASS
BLK

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

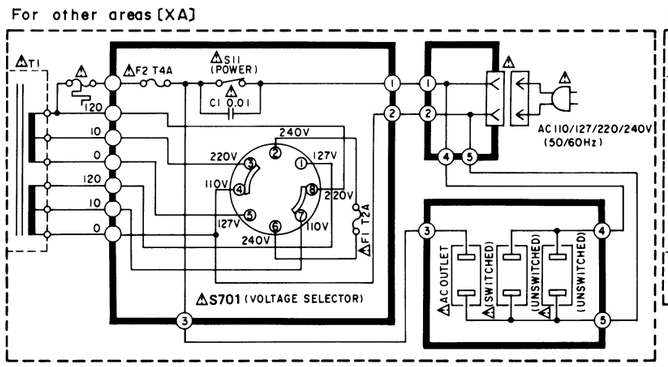
Speaker terminal
For F.R. Germany (EG)



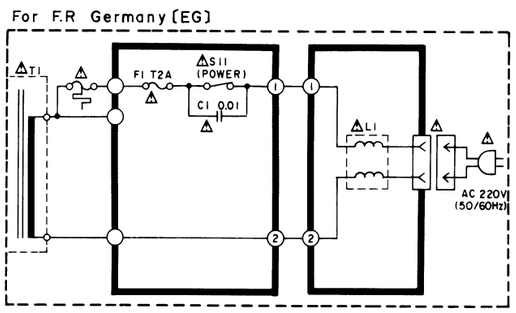
Note:

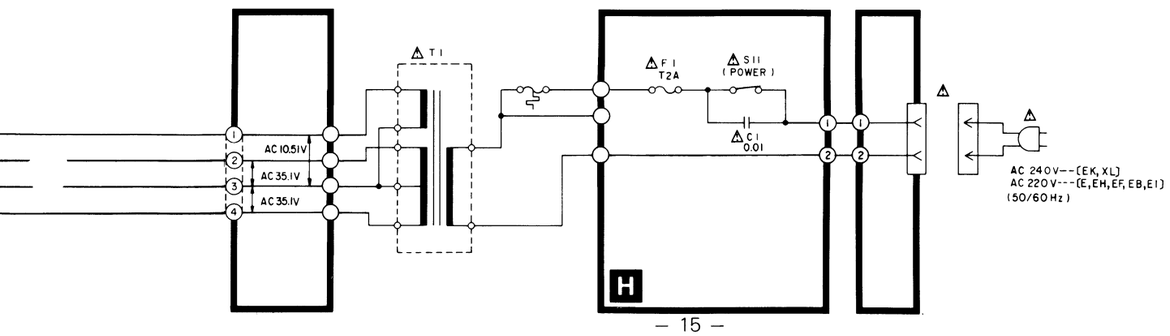
1. **S1-1 ~ S1-4:** Input selector switch in "**phono**" position.
   S1-1: phono S1-2: tuner S1-3: CD
   S1-4: aux S1-5: Tape 2/ext S1-6: Tape 1/DA tape
2. **S3-1, S3-2:** Recording selector in **"CD"** position.
3. **S4:** Phono selector in **"MM"** position.
   (■ MM, ▬ MC)
4. **S5:** CD direct switch in "**off**" position.
   (■ off, ▬ on)
5. **S6:** Loudness switch in "**off**" position.
   (■ off, ▬ on)
6. **S8:** Tone control switch in "**defeat**" position.
   (■ defeat, ▬ on)
7. **S9-1:** Main speaker switch in "**on**" position.
   (■ off, ▬ on)
8. **S9-2:** Remote speaker switch in "**off**" position.
   (■ off, ▬ on)
9. **S11:** Power switch in "**on**" position.
   (■ off, ▬ on)
10. **S701:** (For [XA] area only): Voltage selector switch in **"110V"** position.
    (127V ⟷ 110V ⟷ 220V ⟷ 240V)
11. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    ▒▒▒ Phono signal (Lch)
    ——— Positive voltage lines - - - - Nagative voltage lines.
12. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

For other areas [XA]

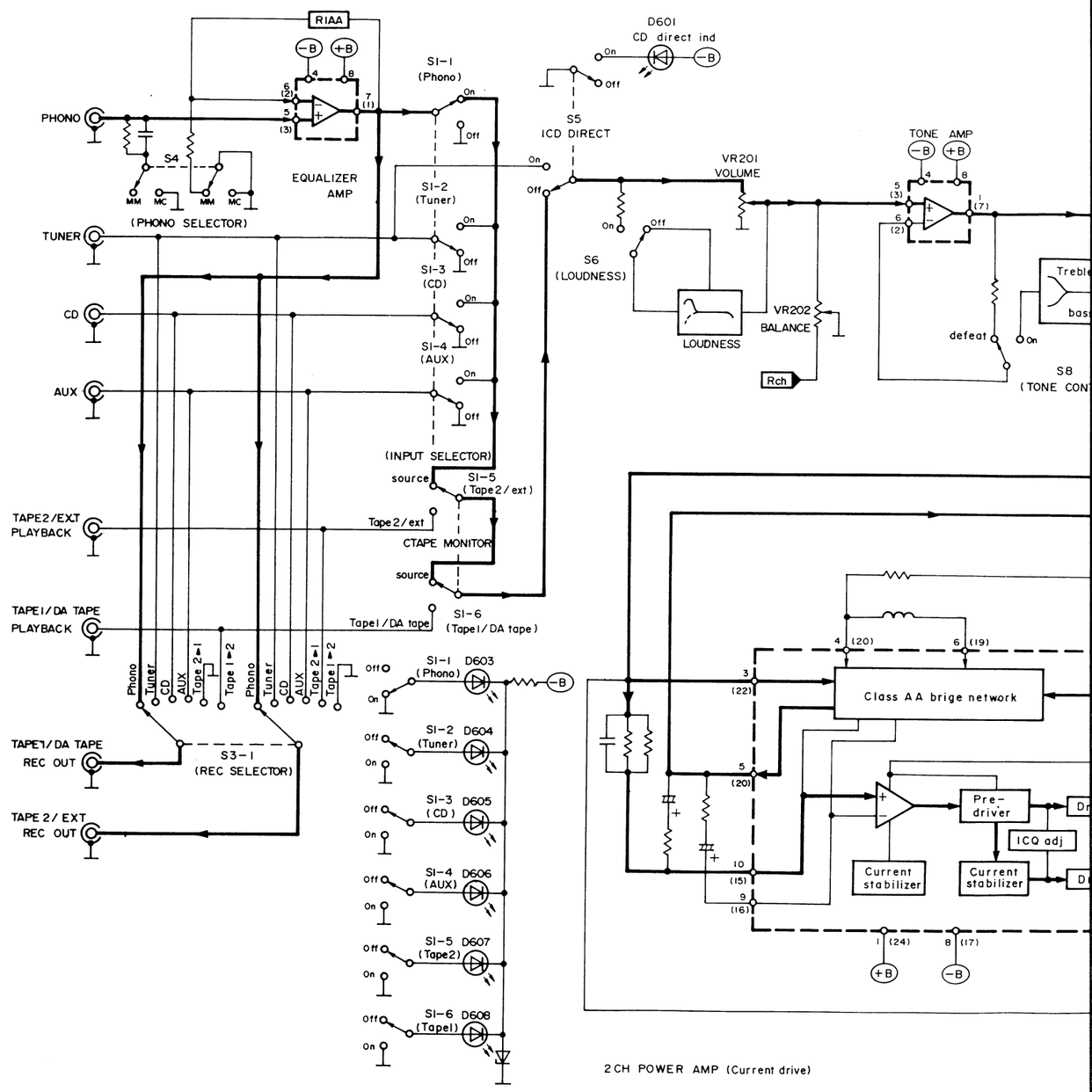


For F.R Germany (EG)



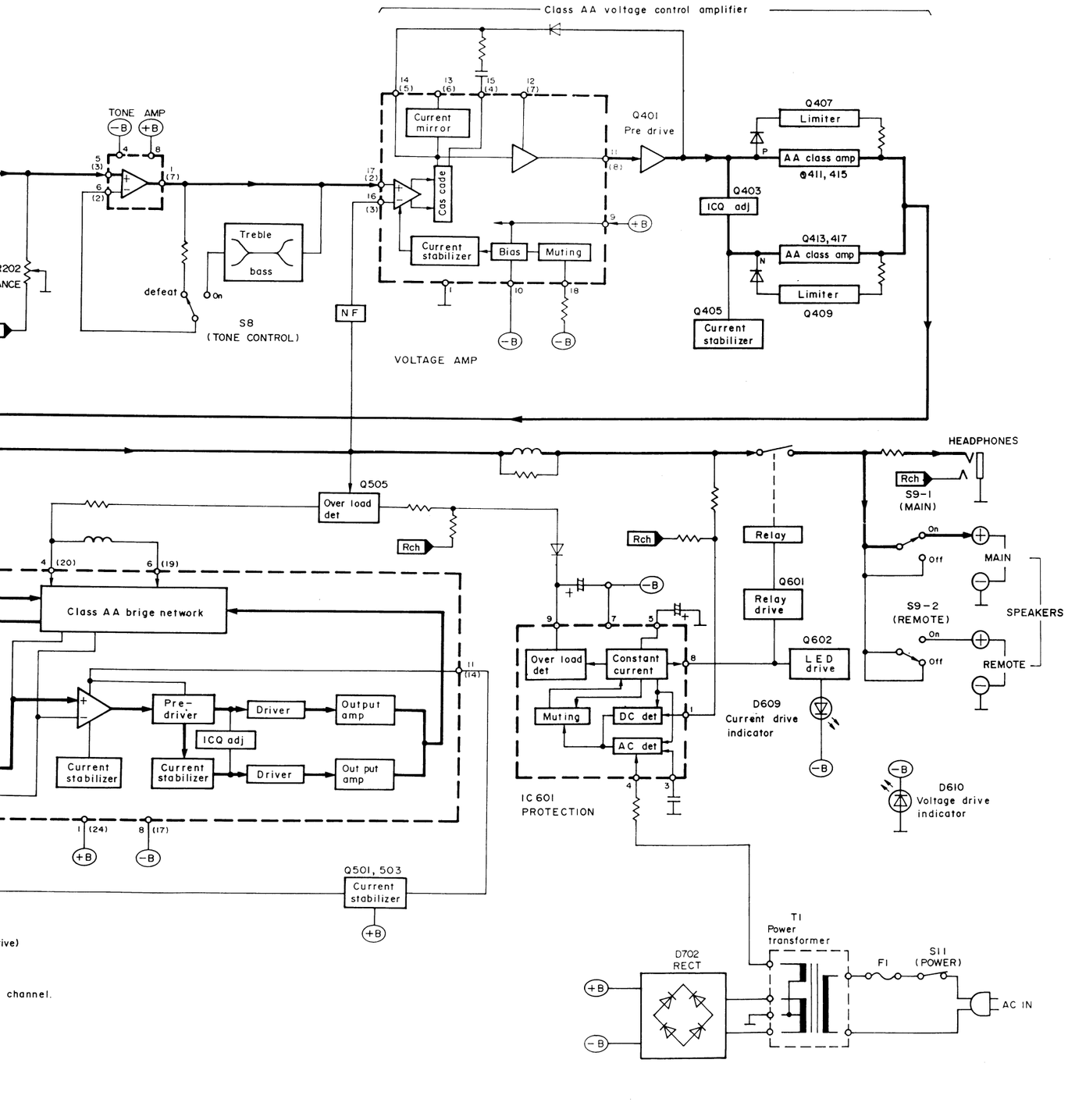


■ BLOCK DIAGRAM



2CH POWER AMP (Current drive)

( ) Indicates pin NO, of right channel.



■ REPLACEMENT PARTS LIST

Notes: * Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.
* Bracketed indications in Ref. No. columns specify the area.
Parts without these indications can be used for all areas.

Numbering System of Resistor

Example

ERD	25	F	J	102
Type	Wattage	Shape	Tolerance	Value

ERX	2	AN	J	471
Type	Wattage	Shape	Tolerance	Value 47x10¹ (ohm)

Numbering System of Capacitor

Example

ECKD	1H	102	Z	F
Type	Voltage	Value	Tolerance	Peculiarity

ECEA	50	M	330
Type	Voltage	Peculiarity	Value (33x10° microfarad)

Resistor Type	Wattage	Tolerance
ERD : Carbon ERG : Metal Oxide ERX : Metal Film ERQ : Fuse Type Metal ERD☐☐L : Carbon (chip) ERO☐☐K : Metal Film (chip) ERC : Solid	10 : 1/8W 12 : 1/2W 25 : 1/4W 1A : 1W 18 : 1/8W S2 : 1/4W S1 : 1/2W 2F : 1/4W 50 : 1/2W 2A : 2W	J : ±5% F : ±1% G : ±2% K : ±10%

Capacitor Type	Voltage	Tolerance
ECE : Electrolytic ECCD : Ceramic ECKD : Ceramic ECQM : Polyester ECQP : Polyproylene ECG : Ceramic ECEA☐☐☐N: Non Polar Electrolytic QCU☐ : Ceramic (Chip Type) ECUX : Ceramic (Chip Type) ECF : Semiconductor EECW : Liquid electrolyte double layer capcitor	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1H : 50V 1V : 35V 50 : 50V 05 : 50V 2H : 500V 2A : 100V 1 : 100V KC : 400V AC KC : 125VAC (UL) 1J : 63V	C : ±0.25pF J : ±5% K : ±10% Z : +80% −20% P : +100% −0% M : ±20% D : ±0.5pF G : ±2%

Ref. No.	Part No.	Part Code
RESISTORS		
R101, R102 (EG)	ERDS2TJ102	001 152 2346 4
R103, R104 (EG)	ERDS2TJ102	001 152 2346 4
R105, R106	ERDS2TJ274	001 152 2437 2
R107, R108	ERDS2TJ221	001 152 2431 8
R109, R110	ERDS2TJ220	001 152 2430 9
R113, R114	ERDS2TJ563	001 152 2446 1
R117, R118	ERDS2TJ151	001 152 2426 5
R119, R120	ERDS2TJ100	001 152 2420 1
R123, R124	ERDS2TJ151	001 152 2426 5
R125, R126	ERDS2TJ682	001 152 2365 1
R127, R128	ERDS2TJ823	001 152 2456 9
R129, R130	ERDS2TJ334	001 152 2438 1
R131, R132	ERDS2TJ561	001 152 2364 2
R201, R202 (EG)	ERDS2TJ102	001 152 2346 4
R203, R204 (EG)	ERDS2TJ102	001 152 2346 4
R205, R206 (EG)	ERDS2TJ102	001 152 2346 4
R207, R208 (EG)	ERDS2TJ102	001 152 2346 4
R209, R210 (EG)	ERDS2TJ102	001 152 2346 4
R211, R212	ERDS2TJ473	001 152 2363 3
R213, R214	ERDS2TJ183	001 152 2429 2
R219, R220	FSR25TJ272T2	
R301, R302	FSR25TJ561T2	
R303, R304	ERDS2TJ823	001 152 2456 9
R305, R306	ERDS2TJ224	001 152 2433 6
R307, R308	ERDS2TJ392	001 152 2439 0
R309, R310	ERDS2TJ223	001 152 2432 7
R311, R312	ERDS2TJ102	001 152 2346 4
R313, R314	ERDS2TJ562	001 152 2445 2
R315, R316	FSR25TJ392T2	
R317, R318	FSR25TJ223T2	
R319, R320	ERDS2TJ183	001 152 2429 2
R401, R402	ERDS2TJ122	001 152 2423 8
R403, R404	ERDS2TJ823	001 152 2456 9
R405, R406	FSR25TJ272T2	
R407, R408	FSR25TJ823T2	
R409, R410	ERDS2TJ561	001 152 2364 2
R411, R412 ⚠	ERD25FJ470	001 152 0309 7
R415, R416	ERDS2TJ182	001 152 2352 6
R417, R418	ERDS2TJ391	001 152 2360 6
R419, R420 ⚠	ERD25FJ101	001 152 0214 3
R421, R422	ERDS2TJ223	001 152 2432 7
R423, R424	ERD25FJ821	001 152 0354 2
R425, R426	ERDS2TJ223	001 152 2432 7
R427, R428	ERD25FJ101	001 152 0214 3
R429, R430	ERD25FJ2R2	001 152 0251 8
R431, R432	ERD25FJ2R2	001 152 0251 8
R433, R434	ERD25FJ101	001 152 0214 3
R435	ERDS2TJ103	001 152 2347 3
R436 ⚠	ERD25FJ470	001 152 0309 7
R437	ERDS2TJ473	001 152 2363 3
R438, R439 ⚠	ERD25FJ6R8	001 152 0335 5
R501, R502	ER0S2TKF4220	001 151 5927 2
R505, R506	ERDS2TJ101	001 152 2421 0
R507, R508	ERDS2TJ101	001 152 2421 0
R509, R510 ⚠	ERD25FJ271	001 152 0272 3
R511, R512	ERDS2TJ271	001 152 2435 4
R513, R514	ERDS1FJ100	001 152 2612 5
R515, R516	ERD25FJ100	001 152 0213 4
R517, R518	ERDS2TJ472	001 152 2362 4
R519, R520	ERDS2TJ153	001 152 2351 7
R523, R524	ERG2SJ331	001 151 3570 9
R601	ERDS2TJ391	001 152 2360 6
R602	ERDS2TJ331	001 152 2356 2
R604	ERDS2TJ471	001 152 2361 5
R605	ERDS2TJ331	001 152 2356 2
R607, R608	ERDS2TJ473	001 152 2363 3
R609	ERDS2TJ153	001 152 2351 7
R610	ERDS2TJ124	001 152 2425 6
R611	ERDS2TJ472	001 152 2362 4
R612	ERG2SJ821	001 151 4940 9
R613	ERDS1FJ180	001 152 2620 5
R614	ERDS2TJ183	001 152 2429 2
R701, R702	ERDS2TJ153	001 152 2351 7
R703, R704 ⚠	ERD25FJ821	001 152 0354 2
R705	ERDS2TJ122	001 152 2423 8
R707, R708	ERDS1FJ822	001 152 5897 6
CAPACITORS		
C1 ⚠ (XA)	ECKDKC103PF2	001 103 3734 7
C1 (E, EG, EF) (EH, EB, EI) (XL)	ECKWNS103ZVS	001 103 9317 6
C103 (EG)	ECKD1H102KB	001 103 1414 8
C103 (E, EK, EF) (EH, EB, EI) (XL, XA)	ECQM1H103JZ	001 106 0667 8
C104 (EG)	ECKD1H102KB	001 103 1414 8
C104 (E, EK, EF) (EH, EB, EI) (XL, XA)	ECQM1H103JZ	001 106 0667 8
C105, C106 (E, EK, EF) (EH, EB, EI) (XL, XA)	ECCD1H181K	001 103 0466 0
C107, C108	ECEA0JU222	001 120 3161 5
C109, C110 (EG)	ECKD1H471KB	001 103 1551 0
C111, C112	ECQM1H122JZ	001 106 0683 8
C113, C114	ECQM1H103JZ	001 106 0667 8
C115, C116	ECQM1H393JZ	001 106 0794 2
C117, C118	ECEA1HN0101S	001 120 0354 0
C119, C120	ECQM1H472JZ	001 106 0801 0
C121, C122	ECKD1H103PF	001 103 1449 7
C123, C124	ECEA1HPS3R3	001 120 6064 3
C203, C204 (EG)	ECCD1H101K	001 103 0341 2
C205, C206 (EG)	ECCD1H101K	001 103 0341 2
C207, C208 (EG)	ECCD1H101K	001 103 0341 2
C209, C210 (EG)	ECCD1H101K	001 103 0341 2
C211, C212	ECCD1H101K	001 103 0341 2

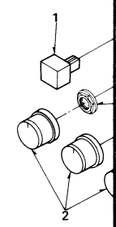
Ref. No.	Part No.	Part Code
C213, C214	ECQM1H563JZ	001 106 0827 0
C301, C302	ECEA1HPS3R3	001 120 6064 3
C303, C304	ECCD1H101K	001 103 0341 2
C305, C306	ECCD1H820K	001 103 0703 6
C307, C308	ECEA1VPS4R7	
C309, C310	ECCD1H390K	001 103 0597 0
C311, C312	ECEA1CPS100	001 120 6036 7
C313, C314	ECQM1H823JZ	001 106 0852 9
C315, C316	ECQM1H153JZ	001 106 0704 0
C317, C318	ECQM1H183JZ	001 106 0723 7
C319, C320	ECQM1H182JZ	001 106 0718 4
C321, C322 ⚠	ECKD1H223PF	001 103 1510 9
C401, C402	ECEA1HPS3R3	001 120 6064 3
C403, C404	ECKD1H271KB	001 103 1515 4
C405, C406	ECEA1CPS220	001 120 6060 7
C407, C408	ECCD1H820K	001 103 0703 6
C409, C410	ECCD1H070D	001 103 0274 6
C411, C412	ECKD1H681K	001 103 1580 5
C413, C414	ECCD2H070D	001 103 0727 8
C415, C416	ECQM1H102JZ	001 106 0661 4
C417, C418	ECEA1HU010	001 120 2842 1
C419, C420	ECCD2H680K	001 103 0772 3
C421, C422	ECCD2H680K	001 103 0772 3
C423, C424	ECKD1H333PF	001 103 1539 6
C425	ECEA2AU100	001 120 4922 4
C426	ECKD1H102KB	001 103 1414 8
(EG)		
C427 ⚠	ECKD1H223PF	001 103 1510 9
C501, C502	ECCD1H560K	001 103 0660 0
C503, C504	ECCD2H330K	001 103 0754 5
C505, C506	ECQM1H392JZ	001 106 0790 6
C507, C508	ECEA1AU101	001 120 2830 5
C509, C510	ECEA1AU101	001 120 2830 5
C511, C512	ECCD2H330K	001 103 0754 5
C513, C514	ECKD1H561KB	001 103 1576 1
C515, C516	ECKD1H333PF	001 103 1539 6
C517, C518	ECKD1H333PF	001 103 1539 6
C519	ECQM1H223JZ	001 106 0739 9
(E, EG, EF)		
(EH, EB, EI)		
(XL, XA)		
C519	ECQM1H473JZ	001 106 0810 9
(EK)		
C520	ECQM1H223JZ	001 106 0739 9
(E, EG, EF)		
(EH, EB, EI)		
(XL, XA)		
C520	ECQM1H473JZ	001 106 0810 9
(EK)		
C521, C522	ECQM1H333JZ	001 106 0779 1
(EG)		
C523, C524	ECKD1H102MD	001 103 1424 6
(EG)		
C525, C526	ECQM1H333JZ	001 106 0779 1
(EG)		
C527, C528	ECKD1H102MD	001 103 1424 6
(EG)		
C529, C530	ECQM1H473JZ	001 106 0810 9
(EK)		
C531, C532	ECEA1HU010	001 120 2842 1
C533, C534	ECFTD472KXL	001 108 0746 0
(E, EK, EF)		
(EH, EB, EI)		
(XL, XA)		
C601	ECEA0JS331	001 120 2975 9
C602	ECFTD223KXL	001 108 0342 6
C603	ECEA0JU470	001 120 3125 9
C604	ECEA1EU4R7	001 120 2840 3
C605	ECEA1CU471	001 120 3202 3
C701, C702	ECEA1HU3R3	001 120 3254 1
C703, C704	ECEA1ES330	001 120 2927 7
C705, C706	ECEA1HV822UM	001 120 6259 4
C708	ECKD2H103PE	001 103 1626 8
(E, EK, EF)		
(EH, EB, EI)		
(XL, XA)		
C708	ECQE2104KS	001 106 0232 1
(EG)		
C712 ⚠	ECKD1H223PF	001 103 1510 9
(EG)		

Ref. No.	Part No.	Part Code	Description
INTEGRATED CIRCUITS			
IC101	AN6558F	001 060 4009 1	I.C., EQUALIZER
IC301	SVIUPC4570C	001 060 8992 7	I.C., EQUALIZER, VOLUME
IC401	AN7062N	001 060 8240 0	I.C., AMP
IC501	SVI4004	001 061 1230 5	I.C., POWER AMP, POWER AMP
IC601	AN7073	001 060 8241 9	I.C., PROTECTION
TRANSISTORS			
Q401, Q402	2SA1123-R	001 030 0242 8	TRANSISTOR
Q403, Q404	2SC1685-QNC	001 030 2729 2	TRANSISTOR
Q405, Q406	2SC2631-Q	001 030 2505 6	TRANSISTOR
Q407, Q408	2SC3311A-Q	001 030 5279 5	TRANSISTOR
Q409, Q410	2SA1309Q	001 030 4058 0	TRANSISTOR
Q411, Q412	2SC2631-Q	001 030 2505 6	TRANSISTOR
Q413, Q414	2SA1123-R	001 030 0242 8	TRANSISTOR
Q415, Q416	2SC3944AQRS	001 030 5941 8	TRANSISTOR
Q417, Q418	2SA1535AQRS	001 030 6991 4	TRANSISTOR
Q501, Q502	2SC2631-Q	001 030 2505 6	TRANSISTOR
Q503, Q504	2SA1123-R	001 030 0242 8	TRANSISTOR
Q505, Q506	2SA992E	001 030 0513 4	TRANSISTOR
Q601	2SA992E	001 030 0513 4	TRANSISTOR
Q602	2SA1309Q	001 030 4058 0	TRANSISTOR
Q701	2SC3944AQRS	001 030 5941 8	TRANSISTOR
Q702	2SA1535AQRS	001 030 6991 4	TRANSISTOR
Q703	2SC1685-QNC	001 030 2729 2	TRANSISTOR
DIODES			
D401, D402	MA167	001 032 4142 5	DIODE
D403, D404	MA29WA	001 032 7250 0	DIODE
D405, D406	MA165	001 032 0494 0	DIODE
D407, D408	MA165	001 032 0494 0	DIODE
D409	MA29WA	001 032 7250 0	DIODE
D501, D502	MA4062-M	001 032 7211 7	DIODE
D503, D504	MA167	001 032 4142 5	DIODE
D505	MA29WA	001 032 7250 0	DIODE
D602, D611	MA4033M	001 032 5623 9	DIODE
D620, D621	MA165	001 032 0494 0	DIODE
D624	SVDSR1K2	001 032 1343 0	DIODE
D701	MA4160M	001 032 5616 8	DIODE, SI
D702	SVDS10VB20F	001 032 1338 7	RECTIFIER
VARIABLE RESISTORS			
VR201	EWJKXA090B15	001 174 8555 1	VARIABLE RESISTER
VR202	EVH0YA015G15	001 174 8584 6	VARIABLE RESISTOR
VR301, VR302	EWCRYA023C15	001 174 8586 4	VARIABLE RESISTOR
VR401, VR402	EVNK6AA00B52	001 180 0496 1	VARIABLE RESISTER
THERMISTORS AND VARISTORS			
TH201, TH202	ERTD2WHL104S		THERMISTOR, TERMISTOR
TH401, TH402	ERTD2WHL104S		THERMISTOR, TERMISTOR

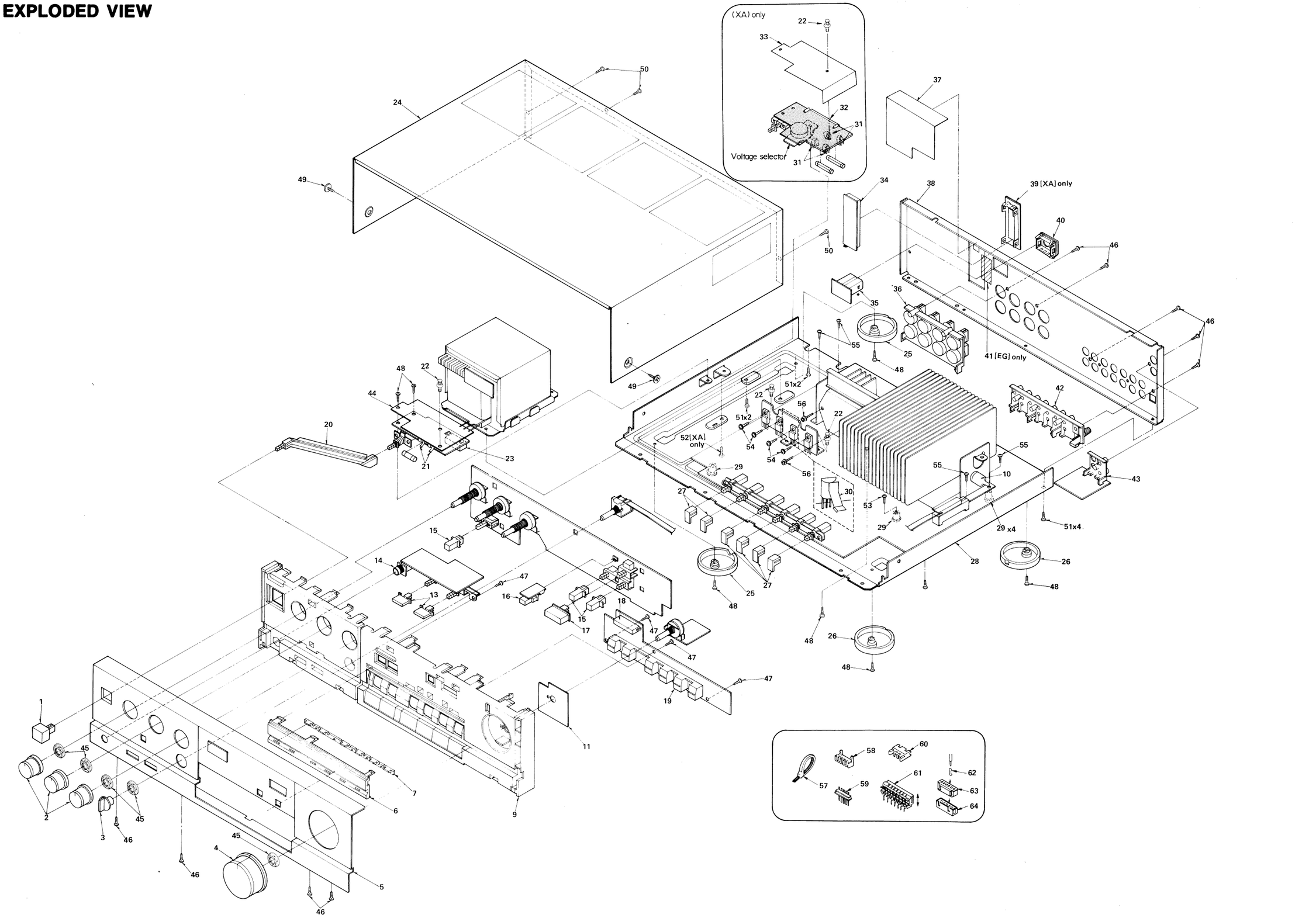
Ref. No.	Part No.	Part Code	Description
COILS AND TRANSFORMERS			
L1 ⚠	SLQZ650MH49	001 210 7126 1	COIL
(EG)			
L101, L102	SLM1Z33	001 210 7084 4	MPX COIL
(EG)			
L501, L502	SLQY07G-40	001 211 2149 9	CHOKE COIL
L503, L504	SLQY18G-10	001 211 2185 5	CHOCK COIL
L505, L506	SLQY07G-40	001 211 2149 9	CHOKE COIL
(EG)			
L507, L508	SLQY07G-40	001 211 2149 9	CHOKE COIL
(EG)			
T1 ⚠	SLT5N467	001 202 9077 1	POWER TRANSFORMER
(E, EG, EF)			
(EH, EB, EI)			
T1 ⚠	SLT5N468	001 202 9078 0	POWER TRANSFORMER
(EK)			
T1 ⚠	SLT5N469		POWER TRANSFORMER
(XA)			
FUSES			
F1 ⚠	XBA2C20TB0	002 380 1352 0	FUSE, T2A250V
(EK)			
F1 ⚠	XBAS2A2001	002 380 0410 1	FUSE, T2A250V
(E, EG, EF)			
(EH, EB, EI)			
(XL, XA)			
F2 ⚠	XBA2C40TR0	002 380 0417 4	FUSE, T4A250V
(XA)			
SWITCHES			
S1-1, S1-2	SSH656	003 435 5817 2	SWITCH
S1-3, S1-4	SSH656	003 435 5817 2	SWITCH
S1-5, S1-6	SSH656	003 435 5817 2	SWITCH
S3	ESA2682	003 439 0120 8	SWITCH
S3	ESA335028B	003 439 1919 3	SWITCH
S4	SSH2114	003 435 5808 3	SWITCH
S5	SSH1215	003 435 5784 4	SWITCH
S6	SSH2114	003 435 5808 3	SWITCH
S8	SSH1218	003 435 5964 8	SWITCH
S9-1, S9-2	SSH2115	003 435 5785 3	SWITCH
S11 ⚠	ESB8215V	003 435 4958 4	PUSH SWITCH
S701	ESE37263	003 430 2327 2	SWITCH
(XA)			
RELAYS			
RL1	SSY126	003 450 2686 0	RELAY

Ref. No.	Part No.	Part Code	Description
CABINET AND CHASSIS			
1 Ⓢ	SBC666	016 702 5545 6	BUTTON, POWER
1 Ⓚ	SBC666-5	016 702 6679 9	BUTTON, POWER
2 Ⓚ	SBN1206	016 700 1846 2	KNOB
2 Ⓢ	SBN1207-1	016 700 1845 3	KNOB
3 Ⓚ	SBN1089-3	016 700 1861 3	KNOB
3 Ⓢ	SBN1089-4	016 700 1860 4	KNOB
4 Ⓚ	SBN1210	016 700 1859 7	KNOB
4 Ⓢ	SBN1210-1	016 700 1862 2	KNOB
5 Ⓚ	SGWUV55A-KE	016 840 7886 9	FRONT PANEL
5 Ⓢ	SGWUV55A-SE	016 840 8024 3	FRONT PANEL
6 Ⓚ	SGX7914	016 846 3856 1	ORNAMENT
6 Ⓢ	SGX7914-1		ORNAMENT
7	SGL246	016 846 3894 5	ORNAMENT
9 Ⓚ	SGXUV55A-KE	016 846 3904 0	ORNAMENT
9 Ⓢ	SGXUV55A-SE	016 846 3927 3	ORNAMENT
10 Ⓢ	SXE1129		HEAT SINK
11	SMC6407-1	016 601 0633 9	SHIELD COVER
13 Ⓢ	SBC439	016 702 0595 6	BUTTON
13 Ⓚ	SBC439-2	016 702 6011 7	BUTTON
14	SJJ126B	003 400 5920 7	JACK
15 Ⓢ	SBC719	016 702 6143 6	BUTTON
15 Ⓚ	SBC719-1	016 702 1277 3	BUTTON
16	LN014314PH1		DIODE, GAASP
17 Ⓚ	SBC820	016 702 6431 1	BUTTON
17 Ⓢ	SBC820-1	016 702 6432 0	BUTTON
18	LN021315P	001 032 8371 8	DIODE, GAASP
19	LN064316P	001 032 8373 6	DIODE, GAASP
20	SUB233	016 712 0272 6	ROD
21	SJT388	003 410 6092 8	LUG TERMINAL
(E, EG, EK)			
(EF, EH, EB)			
(EI, XL)			
22	SHR415	016 652 0088 7	LOCK PIN
23	SJS305-1		JACK,SOCKET
(E, EG, EK)			
(EF, EH, EB)			
(EI, XL)			
24 Ⓚ	SKC1760K992	016 800 2648 5	CABINET
24 Ⓢ	SKC1760S982	016 800 2689 6	CABINET
25	SKL308	016 828 0330 0	FOOT
26	SKL309	016 828 0329 3	FOOT
27	SUB254	016 712 0318 9	ROD
28	SKU11280-3	016 802 1927 5	BOTTOM BOARD
(XA)			
28	SKU11280-4	016 802 1889 4	BOTTOM BOARD
(E, EG, EK)			
(EF, EH, EB)			
(EI, XL)			
29	SHE187-1	016 918 0584 9	SPACER
30	SUS227	016 727 0111 1	SPRING
31	SJT347	003 410 1830 8	FUSE HOLDER
(XA)			
32	SJS702-1		JACK,SOCKET
(XA)			
33	SMX916	016 600 0494 7	SHIELD SPACER
(XA)			
34	SJS9328B	003 410 6976 1	SOCKET
(XA)			
35	SJS9231-1B	003 400 7442 8	SOCKET
(E, EG, EK)			
(EF, EH, EB)			
(EI, XA)			
35 ⚠	SJS9234B	003 400 5922 5	AC INLET
(XL)			
36	SJF4815-2	003 410 3831 9	TERMINAL BOARD
37	SMX909	016 600 0482 1	SHIELD SPACER
38	SGP6810-4A	016 840 8022 5	REAR PANEL
(E)			
38	SGP6810-4B	016 840 7906 2	REAR PANEL
(EG, EF, EH)			
(EB, EI)			
38	SGP6810-4C	016 840 7869 0	REAR PANEL
(EK)			
38	SGP6810-4D	016 840 7940 0	REAR PANEL
(XL)			
38	SGP6810-5A	016 840 7787 1	REAR PANEL
(XA)			
39	SJS9328A	003 410 6975 2	SOCKET COVER
(XA)			

Ref. No.	Part No.	Part Code	Description
40	SJS9231A	003 410 5984 5	SOCKET COVER
(E, EG, EK)			
(EF, EH, EB)			
(EI, XA)			
40 ⚠	SJS9234A	003 400 5921 6	AC INLET COVER
(XL)			
41	SMX477-1	016 600 0501 5	SHIELD SPACER
(EG)			
42	SJF3062N	003 410 6082 0	TERMINAL BOARD
43	SJF3057-5N	003 410 6144 3	TERMINAL BOARD
44	SMX910	016 600 0495 6	SHIELD SPACER
(E, EG, EK)			
(EF, EH, EB)			
(EI, XL)			
45	SNE4021	005 507 0372 5	NUT
46	XTBS3+10JFZ1	005 501 3413 1	TAPPING SCREW
47	XTB3+10GFR	005 501 3126 5	SCREW
48	XTW3+10T	005 501 0996 9	SCREW
49 Ⓢ	SNE2129	005 500 8058 5	SCREW
49 Ⓚ	SNE2129-1	005 500 7938 6	SCREW
50	XTBS3+10JFZ1	005 501 3413 1	TAPPING SCREW
51	XTB3+8FFZ	005 501 2531 0	TAPPING SCREW
52	XYN3+F8	005 503 0513 0	SCREW
(XA)			
53	XTB3+20J	005 501 3410 4	SCREW
54	XTW3+8T	005 501 1358 9	SCREW
55	XTBS3+20F1	005 501 2522 1	SCREW
56	XYN3+F14	005 503 0346 7	TAPPING SCREW
57	SHR301	016 645 0044 0	CLAMPER
58	SJS5341	003 403 4292 1	CONNECTOR
59	SJT3311	003 410 1819 3	PLUG
60	SJT3711	003 410 6955 6	CONNECTOR
61	SJT30840LX-V	003 410 5998 9	LUG TERMINAL
61	SJT30940LX-V	003 410 6150 5	LUG TERMINAL
62	SJT783	003 410 6001 7	CONTACT
63	SJS5215	003 400 5923 4	CONNECTOR
63	SJS5331	003 400 5924 3	CONNECTOR
63	SJS5629	003 400 5917 2	CONNECTOR
63	SJS5715	003 400 6034 4	SOCKET(7P)
64	SJT3213	003 410 6011 5	CONNECTOR
64	SJT3319	003 403 3892 7	CONNECTOR
64	SJT3321	003 410 5999 8	POST(3P)
64	SJT3611	003 410 6000 8	CONNECTOR
PACKINGS			
P1 Ⓚ	SPG5958	016 971 5141 1	CARTON BOX
(E, EG, EK)			
(EH, EB, EI)			
(XL, XA)			
P1 Ⓢ	SPG5959	016 971 5140 2	CARTON BOX
(E, EG, EK)			
(EH, EB, EI)			
(XL, XA)			
P1	SPG5960	016 971 5119 9	CARTON BOX
(EF)			
P2	SPSK101-1	016 977 3351 1	PAD
P3	SPSK102-1	016 977 3350 2	PAD
P4	SPS4613-1	016 977 2865 4	PAD
P5	SPP723	016 978 0207 5	PROTECTION COVER
ACCESSORIES			
A1 ⚠	SJP9215	003 402 1437 9	AC PLUG ADAPTOR
(XA)			
A2 ⚠	SFDAC05E03	003 490 4809 5	POWER CORD
(E, EG, EF)			
(EH, EB, EI)			
A2 ⚠	SFDAC05G02	003 490 2613 3	POWER CORD
(EK)			
A2 ⚠	SJA169-1	003 490 4122 9	POWER CORD
(XA)			
A2 ⚠	SJA173	003 490 4161 2	POWER CORD
(XL)			
A3	SQF12881	016 983 5261 8	INSTRUCTION BOOK
(E, EK, EF)			
(EH, EB, EI)			
(XL)			
A3	SQF12882	016 983 5350 8	INSTRUCTION BOOK
(EG)			
A3	SQF12883	016 983 5286 9	INSTRUCTION BOOK
(XA)			



■ EXPLODED VIEW



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